



Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	ATTORNEY'S DKT NO. 032796-217	APPLICATION NO. Unassigned 10/731,739
	APPLICANT John P. CARULLI <i>et al.</i>	
	FILING DATE December 10, 2003	GROUP Unassigned

U.S. PATENT DOCUMENTS						
Examiner Initials	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication (MM-DD-YYYY)		
	Number	Kind Code (if known)				
CQ	5,691,153		Robert R. RECKER <i>et al.</i>	11-25-1997		
↓	6,545,137		Todd <i>et al.</i>	04-08-2003		
↓	6,555,659		Todd <i>et al.</i>	04-29-2003		
FOREIGN PATENT DOCUMENTS						
Examiner Initials	Foreign Patent Document		Country	Date of Publication (MM-DD-YYYY)	Translation	
	Number	Kind Code (if known)			Yes	no
CQ	WO 99/47529		PCT	09-23-1999		
↓	WO 97/12903		PCT	04-10-1997		
↓	WO 99/09054		PCT	02-25-1999		
↓	WO 98/46743		PCT	10-1998		
NON PATENT LITERATURE DOCUMENTS						
Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
CQ	Annex Form PCT/ISA/206. Communication Relating to the Results of the Partial International Search attached to Invitation to Pay Additional Fees dated May 7, 2001 in PCT/US00/16951 filed on June 21, 2000					
	A. COURSEAU <i>et al.</i> , "Homo Sapiens Chromosome 11 Clone BAC67-M-5 MAP 11q13. *** Sequencing in Progress ***. 3 Ordered Pieces", Database EM_HTG, E.B.I., Hinxton, U.K., Accession Number: AC024123, March 2, 2000, XP002165276, Abstract					
	D.L. KOLLER <i>et al.</i> , "Linkage of a QTL Contributing to Normal Variation in Bone Mineral Density to Chromosome 11q12-13", J. Bone Miner. Res., Vol. 13, No. 12, pp. 1903-1908, December 1998, Blackwell Science, Inc., American Society for Bone and Mineral Research, USA					
	Michael P. WHYTE, "Searching for Gene Defects that Cause High Bone Mass", Am. J. Hum. Genet., Vol. 60; No. 6, pp. 1309-1311, June 1997, The American Society of Human Genetics, USA					
	Marion TROMMSDORFF <i>et al.</i> , "Interaction of Cytosolic Adaptor Proteins with Neuronal Apolipoprotein E Receptors and the Amyloid Precursor Protein", J. Biol. Chem., Vol. 273, No. 50, pp. 33556-33560, December 1998, The American Society for Biochemistry and Molecular Biology, Inc., USA					
	G. SCHNEIDER <i>et al.</i> , "Formation of Focal Adhesions by Osteoblasts Adhering to Different Substrata", Experimental Cell Research, Vol. 214, No. 1, pp. 264-269, September 1994, Academic Press, Inc., USA					
	Frederick M. PAVALKO <i>et al.</i> , "Fluid Shear-Induced Mechanical Signaling in MC3T3-E1 Osteoblasts Requires Cytoskeleton-Integrin Interactions", Am. J. Physiol., Vol. 275, No. 6 (Pt1), pp. C1591-1601, December 1998, The American Physiological Society, USA					
	Mark L. Johnson <i>et al.</i> , "Linkage of a Gene Causing High Bone Mass to Human Chromosome 11 (11q12-13)", Am. J. Hum. Genet., Vol. 60, No. 6, pp. 1326-1332, June 1997, The American Society of Human Genetics, USA					
↓	Dong-Ho KIM <i>et al.</i> , "A New Low Density Lipoprotein Receptor Related Protein, LRP5, is Expressed in Hepatocytes and Adrenal Cortex, and Recognizes Apolipoprotein E", J. Biochem., Vol. 124, No. 6, pp. 1072-1076, December 1998, The Japanese Biochemical Society, JAPAN					
Examiner Signature	/Celine Qian/			Date Considered		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Substitute for forms 1449A/PTO & 1449B/PTO	ATTORNEY'S DKT NO. 032796-217	APPLICATION NO. Unassigned 10/731,737
	APPLICANT John P. Carulli et al.	
	FILING DATE December 10, 2003	GROUP Unassigned
	<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	

U.S. PATENT DOCUMENTS				
Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)

FOREIGN PATENT DOCUMENTS					
Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation Yes No

NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
CQ	JOHNSON ET AL., <i>Journal of Bone and Mineral Research</i> , 11 (Supplement 1):S255, abstract S661, August 1996
	NAKAGAWA ET AL., "Fine Mapping of the Diabetes-Susceptibility Locus, IDDM4, on Chromosome 11q13", <i>American Journal of Human Genetics</i> , 63(2): 547-56 (Aug 1998)
	HEY ET AL., "Cloning of a Novel Member of the Low-Density Lipoprotein Receptor Family," <i>Gene</i> 216: 1:103-111 (1998)
	DONG ET AL., "Molecular Cloning and Characterization of LR, Novel LDL Receptor Family Protein with Mitogenic Activity", <i>Biochemical and Biophysical Research Communication</i> , 251:(3) 784-90 (Oct 29, 1998)
	BOLLAG ET AL., "Osteoblast-Derived Cells Express Functional Glucose-Dependent Insulinotropic Peptide Receptors", <i>Endocrinology</i> , 141:1228-1235, 2000
	ZIEGLER ET AL., "Glucocorticoid-Induced Osteoporosis: Prevention and Treatment", <i>Steroids</i> , 63:344-348, 1998
	KUNDU ET AL., "Role of Polypeptides in the Treatment and Diagnosis of Osteoporosis", <i>Peptides</i> , 20:523-537, 1999
	RODAN ET AL., "Therapeutic Approaches to Bone Diseases", <i>Science</i> , 289:1508-1514, 2000
	MAURER ET AL., "Lipid Based Systems for the Intracellular Delivery of Genetic Drugs", <i>Molecular Membrane Biology</i> , 16:129-140 1999
	VERMA ET AL., "Gene Therapy, Promises, Problems, and Prospects", <i>Nature</i> , 389:239-242, 1997
	ANDERSON, "Human Gene Therapy", <i>Nature</i> , 392:25-30, 1998
	WALTHER ET AL., "Viral Vectors for Gene Transfer", <i>Drugs</i> , 60:249-271, 2000

Examiner Signature Celine Qian	Date Considered
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Sheet 1 of 1 Form PTO-1449				DOCKET NO. 47038.0217		APPLN. NO. 10/731,739	
U.S. Department of Commerce				APPLICANT: John P. Carulli et al.			
Date Filed: November 2, 2005				FILING DATE: December 10, 2003		GROUP 1636	
<b>U.S. PATENT DOCUMENTS</b>							
Examining Division	Document Number	Date	Name	Class	Subclass	Filing Date if appropriate	
CQ	2003/0219793	11/27/2003	Carulli et al.				
↓	2004/0038860	02/26/2004	Allen et al.				
	6,770,461	08/03/2004	Carulli et al.				
	6,780,609	08/24/2004	Carulli et al.				
↓	2005/0196349	09/08/2005	Wu et al.				
<b>FOREIGN PATENT DOCUMENTS</b>							
	Document Number	Date	Country	Class	Subclass	Translation Yes/No/Abstract	
CQ	WO 02/092000 A2	11/21/2002	PCT			Abstract	
<b>OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, etc.)</b>							
CQ	CA	Johnson et al., "The Gene for High Bone Mass," Endocrinologist, vol. 12, no. 5, 2002, pp 445-453, Lippincott Williams & Wilkins, Philadelphia PA					
↓	CB	Search Report issued in European Patent Application EP 02746370. <i>No date.</i>					
Examiner Signature: <u>Celine Qian</u>				Date Considered:			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).  
PTO-1449.doc

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Complete If Known

# **SECOND INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 1

Application Number 10/731,739  
 Filing Date December 10, 2003  
 First Named Inventor John P. CARULLI et al.  
 Examiner Name Unassigned  
 Attorney Docket Number 032796-217

## U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
CQ	09/544,398		Carulli et al.	04-05-2000
	09/543,771		Carulli et al.	04-05-2000
	09/578,900		Carulli et al.	05-26-2000
	10/240,851		Carulli et al.	10-04-2002
	10/680,287		Askew et al.	10-08-2003
	10/477,173		Allen et al.	11-10-2003
	10/477,238		Bablj et al.	04-12-2004
	10/731,739		Carulli et al.	12-10-2003
	10/834,377		Carulli et al.	04-29-2004

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation	
					Yes	No
CQ	WO 00/58496	A	PCT	10-05-2000		
CQ	WO 01/92891	A	PCT	12-06-2001		

## NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
CQ	European Search Report dated May 4, 2004

Examiner Signature	Celine Qian	Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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# **THIRD INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

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of

1

## **Complete If Known**

Application Number 10/731,739  
 Filing Date December 10, 2003  
 First Named Inventor John P. CARULLI et al.  
 Examiner Name Celine X. Qian  
 Attorney Docket Number 032796-217

## **U.S. PATENT DOCUMENTS**

Examine Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)

## **FOREIGN PATENT DOCUMENTS**

Examine Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	STATUS						
					Translation	Partial Translation	Eng. Lang. Summary	Search Report	IPER	Abstract	Cited in Spec

## **NON-PATENT LITERATURE DOCUMENTS**

Examine Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
CQ	Gong et al., "LDL Receptor-Related Protein 5 (LRP5) Affects Bone Accrual and Eye Development," Cell 107, pp. 513-523, Cell Press, Cambridge, Massachusetts, 2001.
	Magoori et al., "Severe Hypercholesterolemia, Impaired Fat Tolerance, and Advanced Atherosclerosis in Mice Lacking Both Low Density Lipoprotein Receptor-related Protein 5 and Apolipoprotein E*," The Journal of Biological Chemistry 278(13) pp. 11331-11336, The American Society for Biochemistry and Molecular Biology, Inc., Baltimore, Maryland, 2003.
	Boyden et al., "HIGH BONE DENSITY DUE TO A MUTATION IN LDL-RECEPTOR-RELATED PROTEIN 5," The New England Journal of Medicine 346(20), pp. 1513-1521, Massachusetts Medical, Boston, Massachusetts, 2002.
	Van Wesenbeeck et al., "Six Novel Missense Mutations in the LDL Receptor-Related Protein 5 (LRP5) Gene in Different Conditions with an Increased Bone Density," Am. J. Human. Genet., 72, pp. 763-771, The University of Chicago Press, Chicago, Illinois, 2003.
	Little et al., "A Mutation in the LDL Receptor-Related Protein 5 Gene Results in the Autosomal Dominant High-Bone-Mass Trait," Am. J. Hum. Genet., 70, pp. 11-19, The University of Chicago Press, Chicago, Illinois, 2002.
	Babij et al., "High Bone Mass in Mice Expressing a Mutant LRP5 Gene," Journal of Bone and Mineral Research, 18, pp. 960-974, Mary Ann Liebert, New York, 2003.
	Mizuguchi et al., "LRP5, low-density-lipoprotein-receptor-related protein 5, is a determinant for bone mineral density," J. Hum. Genet. 49, pp. 80-86, Springer Verlag, Tokyo, Japan, 2004.
	International Search Report dated August 10, 2004.

Examiner Signature **Celine Qian** Date Considered

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